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Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/656,709 | <b>Applicant(s)</b><br>PARK ET AL. |  |
|                              | <b>Examiner</b><br>Kim-Kwok CHU      | <b>Art Unit</b><br>2653            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 7/2/04.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9,11-24,35,36 and 41-94 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9,11-16,19,21,23,24,35,36,41-54,58-75,78,80,82 and 84-94 is/are rejected.
- 7) ☐ Claim(s) 17,18,20,22,55-57,76,77,79,81 and 83 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Claim Rejections - 35 USC § 102**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless -  
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*

2. Claims 1, 5, 7, 8, 11, 15, 16, 35 and 36 are rejected under 35 U.S.C. § 102(e) as being anticipated by Verbakel et. al. (U.S. Patent 6,370,090).

Verbakel teaches an optical recording medium 11 having all of the elements and means as recited in claims 1, 5, 7, 8, 11, 15 and 16. For example, Verbakel teaches the following:

(a) as in claim 1, a read-only storage area 120, 122 and 124 (Fig. 5; an area containing a file system 122 and a master TOC are read-only);

(b) as in claim 1, a non-magnetic writable storage area 126 (Fig. 6; the non-magnetic recording medium 11 is a CD-R, CD-RW etc.; column 2, lines 1-4; area 126 is writable where audio information is written);

(c) as in claim 1, a read-only lead-in area 120, 124 having first control information for both the read-only area 122, 124, 130 and non-magnetic writable storage area 126 (Fig. 5);

(d) as in claim 1, a non-magnetic writable lead-in area (area TOC-1) having second control information relating to the non-magnetic writable storage area 35 (Fig. 6);

(e) as in claim 5, the read-only lead in area 120, 124 comprises hybrid identification information indicating that the optical recording medium 11 is a hybrid disc having the read-only storage area 120, 122, 124, 130 and the writable storage area 126, 128 (Figs. 5 and 6);

(f) as in claim 7, the writable storage area 126 comprises a control data zone (areas TOC-1); and the read-only lead-in area 120, 124 comprises first physical format information of the read-only storage area and second physical format information of the control data zone (Figs. 4 and 5; lead-in area has all the synchronization information about the medium);

(g) as in claim 8, the first physical format information comprises reserved bytes which stores the second physical format information ((Fig. 4);

(h) as in claim 11, the read-only storage area 122, 124 etc. and the read-only lead-in area 120 are compatible with a read-only memory (ROM) specification (Figs. 4 and 5; column 4, lines 43 and 44);

(i) as in claim 15, the read-only lead in area 120 comprises a control data zone which stores the first control information (Fig. 5; lead-in area inherently stores control data such as track number, rotation speed etc.); and

(j) as in claim 16, the first control information comprises physical format information for the read-only storage area 122, 124, 130, 132 etc. (Figs. 4 and 5);

3. Claims 35 and 36 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. The prior art of Verbakel also teaches the following:

(a) as in claim 36, the optical recording medium 11 further comprises a first substrate having the read-only storage area 120, 122 and 124 extending from the inner part to the outer part of the first substrate (Fig. 3; the recording medium inherently has a first substrate as a base for supporting a recording layer); and

(b) as in claim 36, a second substrate attached (joined) to the first substrate, having a transparent region extending from an inner part to an outer part of the second substrate 32 (Figs. 1a and 3; the center transparent portion 10 of a CD-R, CD-RW etc. is the second substrate).

4. Claims 41 and 42 are rejected under 35 U.S.C. § 102(e) as being anticipated by Verbakel et al. (U.S. Patent 6,370,090).

Verbakel teaches recording medium 11 having all of the elements and means as recited in claims 41 and 42. For example, Verbakel teaches the following:

(a) as in claim 41, the disc is a DVD disc (Fig. 3, column 2, lines 2-4);

(b) as in claim 41, a read-only storage area 120, 122, 124 having a lead-in area 120 and a data area 130 (Fig. 5);

(c) as in claim 41, a non-magnetic writable storage area 126, 128 having a lead-in area TOC-1 and a data area (Figs. 5 and 6);

(d) as in claim 41, the lead-in area 120 of read-only storage area comprises physical format information (addresses) for the read-only storage area and the non-magnetic writable storage (Figs. 4-6); and

(e) as in claim 42, the lead-in area 120 of the read-only storage area comprises hybrid disc information (addresses) indicating whether the non-magnetic writable storage area 126, 128 exists (Figs. 4-6; addresses of an audio area indicates its existence).

5. Claims 45, 46, 48, 51-54, 63, 64, 66-68 and 72-75 are rejected under 35 U.S.C. § 102(e) as being anticipated by Verbakel et al. (U.S. Patent 6,370,090).

Verbakel teaches an apparatus for recording and reproducing data onto/from an optical recording medium 11 having all of the elements and means as recited in claims 45, 46, 48, 52-54 and 63.

For example, Verbakel teaches the following:

(a) as in claim 45, a read-only storage area 120, 122 and 124 (Fig. 5; an area containing a file system 122 and a master TOC are read-only);

(b) as in claim 45, a non-magnetic writable storage area 126 at an outer part of the optical recording medium 11 (Fig. 6; the non-magnetic recording medium 11 is a CD-R, CD-RW etc.; column 2, lines 1-4; area 126 is writable where audio information is written);

(c) as in claim 45, a system controller 20 which generates identification information (TOC) to indicate that the optical recording medium is a hybrid disc having the read-only storage area and the writable storage area (Fig. 3);

(d) as in claim 45, a recording and/or reproducing unit 38 which records or reads data from the read-only storage area 120, 122, 124 and the non-magnetic writable storage area 126, 128 based on the generated identification information which is stored

in a lead-in area 120, 124 of the read-only storage area 31 (Figs. 4 and 5);

(e) as in claim 46, the system controller 20 generates first control information (TOC) for both the read-only and writable storage areas and second control information (TOC in area 126) relating to the writable storage area 126 (Fig. 5);

(f) as in claim 46, the recording and/or reproducing unit 38 records the first control information in the lead-in area 120 of the read-only storage area and records the second control information in a lead-in area (TOC-1) of the writable storage area 126 (Fig. 5);

(g) as in claim 48, the first control information 120 comprises physical format information (addresses) of the read-only storage area and physical format information of a control data zone of the writable storage area 126 (Figs. 4 and 5);

(h) as in claim 51, the recording and/or reproducing is according to a digital versatile disc (DVD) specification (Figs. 4-6; column 2, lines 2-4);

(i) as in claim 52, the recording and/or reproducing unit 38 controls a reference linear velocity for reproducing the data in the read-only storage area 120, 122, 124 to be the same as a reference linear velocity of data at an innermost part of the non-magnetic writable storage area 126 (a reference linear



velocity is a basic mode of rotating a recording medium such as 4X in a CD-ROM);

(j) as in claim 53, the read-only lead-in area 120 comprises a control data zone which stores the first control information (Fig. 5; lead-in area 120 stores addresses of other stored information);

(k) as in claim 54, the first control information comprises physical format information for the read-only storage area 122, 124 (Figs. 4 and 5);

(l) as in claim 54, the first control information comprises a hybrid disc identification (address) information indicating that the optical recording medium 11 is a hybrid disc having the read-only storage area 120, 122, 124 and the non-magnetic writable storage area 126, 128 (Fig. 5);

(m) as in claim 54, the first control information comprises a physical format information (addresses) for the non-magnetic writable storage area 126, 128 (Figs. 4 and 5);

(n) as in claim 63, the first control information for both the read-only and non-magnetic writable storage areas in the lead-in area 120 of the read-only storage area and second control information relating to the non-magnetic writable storage area in a lead-in area of the writable storage area 126 (Fig. 5);

(o) as in claim 63, the recording and/or reproducing unit 38 for reading the first and second control information so that

the system controller 20 causes the recording and/or reproducing unit 38 to read the data from the read-only and writable storage areas based upon the first and second control information (Figs. 3-6); and

(p) as in claim 64, the recording and/or reproducing is according to a digital versatile disc (DVD) specification (Figs. 4-6; column 2, lines 2-4);

6. Method claims 66-68 and 72-75 are drawn to the method of using the corresponding apparatus claimed in claims 45, 46, 48, 51-54, 63 and 64. Therefore method claims 66-68 and 72-75 correspond to apparatus claims 45, 46, 48, 51-54, 63 and 64 and are rejected for the same reasons of anticipation as used above.

7. Claim 65 is rejected under 35 U.S.C. § 102(e) as being anticipated by Verbakel et al. (U.S. Patent 6,370,090).

Verbakel teaches an apparatus for reproducing data from an optical recording medium 11 having all of the elements and means as recited in claim 65. For example, Verbakel teaches the following:

(a) as in claim 65, a read-only storage area 120, 122, 124 at an inner part and a non-magnetic writable storage area 126, 128 at an outer part of the optical recording medium 11 (Figs. 3-5);

(b) as in claim 65, a reproducing unit 38 which reproduces data from the read-only storage area and the non-writable writable storage area (Fig. 3); and

(c) as in claim 65, a system controller 20 which controls a reference linear velocity of the reproducing unit 38 for reproduction of the data in the read-only storage area to be the same as a reference linear velocity for reproduction of the data in an innermost part of the non-magnetic writable storage area (a reference linear velocity is a basic mode of rotating a recording medium such as 4X in a CD-ROM).

8. Claims 84-87 and 90 are rejected under 35 U.S.C. § 102(e) as being anticipated by Verbakel (U.S. Patent 6,370,090).

Verbakel teaches a method of reproducing data from an optical recording medium 11 having all of the steps as recited in claims 84-86 and 90. For example, Verbakel teaches the following:

(a) as in claim 84, reproducing data from an optical recording medium 11 having a read only storage area 120, 122, 124 at an inner part of the optical recording medium 11 (Fig. 5);

(b) as in claim 84, reproducing data from the optical recording medium 11 having a non-magnetic writable storage area 126, 128 at an outer part of the optical recording medium 11 (Figs. 5 and 6);

(c) as in claim 84, storing identification information stored in a lead-in area 120 of the read-only storage area to indicate that the optical recording medium 11 is a hybrid disc having the read-only storage area 120, 122, 124 and the non-magnetic writable storage area 126, 128 (Figs. 4-6);

(d) as in claim 84, reading the identification information from the lead-in area 120 of the read-only storage area (Fig. 5);

(e) as in claim 84, reading data from the read-only and non-magnetic writable storage areas based upon the identification information (Figs. 4 and 5);

(f) as in claim 85, the optical recording medium 11 has a first control information (addresses for both the read-only and non-magnetic writable storage areas in the lead-in area 120 of the read-only storage area and second control information (area TOC-1) relating to the writable storage area 126 in a lead-in area of the writable storage area (Figs. 4-6);

(g) as in claim 85, the reading of the identification information comprises reading the first and second control information (Figs. 4-6);

(h) as in claim 85, the reading of the data comprises reading the data from the read-only and writable storage areas based upon the first and second control information (Figs. 4-6);

(i) as in claim 86, the first control information comprises physical format information of the read-only storage area 120, 122, 124; and physical format information of a control data zone of the non-magnetic writable storage area 126, 128 (Figs. 4-6);

(j) as in claim 87, the recording and/or reproducing is according to a digital versatile disc (DVD) specification (Figs. 4-6; column 2, lines 2-4); and

(k) as in claim 90, controlling a reference linear velocity for reproducing data in the read-only storage area to be the same as a reference linear velocity of data at an innermost part of the writable storage area (a reference linear velocity is a basic mode of rotating a recording medium such as 4X in a CD-ROM).

9. Claim 92 is rejected under 35 U.S.C. § 102(e) as being anticipated by Verbakel (U.S. Patent 6,370,090).

Verbakel teaches a method of reproducing data from an optical recording medium 11 having all of the steps as recited in claim 84. For example, Verbakel teaches the following:

(a) as in claim 92, read only storage area 120, 122, 124 at an inner part and a non-magnetic writable storage area 126, 128 at an outer part of the optical recording medium 11 (Fig. 5);

(b) as in claim 92, reproducing data from the read-only storage area 31 and the writable storage area 32 (Fig. 3); and

(c) as in claim 92, controlling a reference linear velocity for reproduction of the data in the read-only storage area to be the same as a reference linear velocity for recording or reproduction of the data in an innermost part of the non-magnetic writable storage area (a reference linear velocity is a basic mode of rotating a recording medium such as 4X in a CD-ROM).

**Claim Rejections - 35 USC § 103**

10. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

11. Claims 2, 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Kozuka et al. (U.S. Patent 6,466,735).

Verbakel teaches an optical disk very similar to that of the instant invention. For example, Verbakel teaches the following:

(a) as in claim 2, the read-only storage area 120, 122, 124 comprises a read-only lead-in area 120 (Fig. 5);

(b) as in claim 2, a read-only memory (ROM) data area 122 (Fig. 5);

(c) as in claim 2, the non-magnetic writable storage area 126, 128 comprises a writable lead-in area (area TOC-1) (Fig. 5);

(d) as in claim 2, the non-magnetic writable lead-in area (area TOC-1) comprises a connection zone to connect the read-only storage area 124 and the non-magnetic writable storage area 126 (Fig. 5, area TOC-1 is a connection zone of areas 124 and 126);

(e) as in claim 2, a random access memory data area 130 (Fig. 5; recording medium 11 is a DVD-RAM; column 2, lines 2-4);

(f) as in claim 3, the read-only lead in area 120 comprises hybrid identification information (addresses) indicating that the optical recording medium 11 is a hybrid disc having the read-only storage area 120, 122, 124 and the non-magnetic writable storage area 126, 128 (Figs. 5 and 6);

(g) as in claim 9, the non-magnetic writable storage area 126, 128 comprises a control data zone TOC-1 (Fig. 6); and

(h) as in claim 9, the read-only lead-in area comprises physical format information (Table of Contents) of the read-only storage area and physical format information of the control data zone (Figs. 4-6).

However, Verbakel does not teach the following:

(a) as in claim 2, a read-only lead-out area in the non-magnetic writable storage area 126.

Kozuka teaches the following:

(a) a read-only lead-out area in the writable storage area (Fig. 6; column 6, lines 48-52).

A disc's management information such as Table of Contents and sector defective addresses are stored in the inner side and outer side of a recording medium such as Kozuka's so that a user can not accidentally erase it. When there is an advantage of separating a disc's management data and user data, it would have



been obvious to one of ordinary skill in the art at the time of invention to reserve a lead-in and a lead-out area on Verbakel's disc similar to Kozuka's, because the reserve area such as the lead-out area can be used to store management information.

12. Claims 4, 6, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Kozuka et al. (U.S. Patent 6,466,735).

Verbakel teaches an optical disc 11 very similar to that of the instant invention. For example, Verbakel teaches the following:

(a) as in claims 4 and 6, a hybrid identification information (addresses) comprises information indicating a presence or absence of the non-magnetic writable storage area (Figs. 4-6).

However, Verbakel does not teach the following:

(a) as in claims 4, 6, 19 and 21, a part version indicating a version number of the optical recording medium;

(b) as in claim 19, the physical format information for the read-only storage area comprises book type information indicating that the optical recording medium is compatible with a digital versatile disk read-only memory (DVD-ROM) specification.

Kozuka teaches the following:

(a) a part version indicating a version number of the optical recording medium (column 7, line 36); and

(a) a book type information indicating that the optical recording medium is compatible with a digital versatile disk read-only memory (DVD-ROM) specification (Fig. 23, step S33; book type information is a program file such as the navigation file of the DVD-ROM).

Information or programs stored in a DVD disc such as Kozuka's can be renewed or updated. For the benefit of verifying the difference of stored information, it would have been obvious to one of ordinary skill in the art to include a version number of the disc similar to Kozuka's, because the version number can be used to alert a user when the disc is being edited/updated.

On the other hand, for navigating the contents of a data storage medium, it would have been obvious to one of ordinary skill in the art to replace Verbakel's storage medium with Kozuka's DVD-ROM disc, because the DVD-ROM type disc has a data storing specification which includes program titles and language choices. Such specification has a purpose of better file management so that the contents of the stored information can be viewed like a book.

13. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Kozuka et al. (U.S. Patent 6,466,735).

Verbakel teaches an optical recording medium very similar to that of the instant invention. For example, Verbakel teaches the following:

(a) as in claim 13, a minimum size of the writable storage area is at least as great as a size of a single zone defined by a digital versatile disc random access memory (DVD-RAM) specification (column 2, lines 2-4).

However, Verbakel does not teach the following:

(a) as in claim 12, the disc is a DVD disc with DVD-ROM and DVD-RAM specifications.

Kozuka teaches the following:

(a) a DVD disc having a ROM layer and a RAM layer (Fig. 6).

Traditional optical storage medium such as Verbakel's optical disc has a moderate storage capacity. Hence, when there is a need for storing large amount of data in a compact size, it would have been obvious to one of ordinary skill in the art to replace Verbakel's optical disc with Kozuka's hybrid DVD with DVD-ROM and DVD-RAM specifications, because the hybrid DVD disc has an advantage of high storage capacity and can read/write information in a high transfer rate.

14. Claims 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090).

Verbakel teaches an optical disc very similar to that of the instant invention. However, Verbakel does not teach the following:

(a) as in claim 14, the read-only storage area has a start position at a diameter of approximately 48mm, and an ending position at a diameter greater than the approximately 48mm. and less than approximately 116mm if the optical recording medium has a diameter of approximately 120mm, and has the start position at a diameter of approximately 48mm, and an ending position at a diameter greater than the approximately 48mm and less than approximately 76mm if the optical recording medium has a diameter of approximately 80mm; and the writable storage medium is arranged in a remaining area of the optical recording medium which does not contain read-only data.

With respect to the starting and ending of the read-only region, it is not novel. Depending on the usage of the optical disk such as for storing programs such as multimedia information or for storing back up data, it would have been obvious to one of ordinary skill in the art at the time of invention to optionally design the size of the read-only area and the writable storage area so that the disk can be best suitable for either storing video programs or erasable information.

15. Claims 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Kozuka et al. (U.S. Patent 6,466,735).

Verbakel teaches an optical disc 11 very similar to that of the instant invention. However, Verbakel does not teach the following:

(a) as in claim 58, a part version indicating a version number of the optical recording medium;

(b) as in claim 58, the physical format information for the read-only storage area comprises book type information indicating that the optical recording medium is compatible with a digital versatile disk read-only memory (DVD-ROM) specification.

Kozuka teaches the following:

(a) a part version indicating a version number of the optical recording medium (column 7, line 36); and

(b) a book type information indicating that the optical recording medium is compatible with a digital versatile disk read-only memory (DVD-ROM) specification (Fig. 23, step S33; book type information is a program file such as the navigation file of the DVD-ROM).

Both Verbakel and Kozuka do not teach the following:

(a) as in claim 59, the existence information and the part version information are stored in bytes 17 and 18 of the physical format information.

Information or programs stored in a DVD disc such as Kozuka's can be renewed or updated. For the benefit of verifying the difference of stored information, it would have been obvious to one of ordinary skill in the art to include a version number of the disc similar to Kozuka's, because the version number can be used to alert a user when the disc is being edited/updated.

On the other hand, for navigating the contents of a data storage medium, it would have been obvious to one of ordinary skill in the art to replace Verbakel's storage medium with Kozuka's DVD-ROM disc, because the DVD-ROM type disc has a data storing specification which includes program titles and language choices. Such specification has a purpose of better file management so that the contents of the stored information can be viewed like a book.

With respect to the addresses of book type information and part version in the control information, it is not novel. In other words, in order to recognize the book type and its version, of a disc, it would have been obvious to one of ordinary skill in the art at the time of invention to optionally specify the addresses of control information such as book type and its version in a beginning address of a lead-in area so that these information can be accessed early during the control information reading stage.

16. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Mine (U.S. Patent 6,243,338).

Verbakel teaches an optical disc 11 very similar to that of the instant invention. For example, Verbakel teaches the following:

(a) as in claims 23 and 24, a connection zone (TOC-1) which connects the read-only storage area 124 and the non-magnetic writable storage area 126 (Fig. 5).

However, Verbakel does not teach the following:

(a) as in claims 23 and 24, at least one defect management zone, and a drive test zone.

Mine teaches at least one defect management zone (DMA 1&2) and a drive test zone (Fig. 2; column 6, lines 1-8).

A rewritable storage medium has defective data sectors caused by occasional bad recording surfaces and scratches on the storage area. Therefore, it is necessary for a rewritable disc to prepare a list of bad sectors during a write-test process in order to verify whether a recording sector is good or bad. Hence, it would have been obvious to one of ordinary skill in the art at the time of invention to include defect management zone and drive test zone in Verbakel's lead-in area similar to Mine's, because by including the defect management zone and drive test zone in Verbakel's lead-in area, the reading/writing of data

from/on a sector without knowing its condition before can be prevented.

17. Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Kozuka et al. (U.S. Patent 6,466,735) and Mine (U.S. Patent 6,243,338).

Verbakel teaches an optical disc 11 very similar to that of the instant invention. For example, Verbakel teaches the following:

(a) as in claims 43 and 44, the lead-in area (TOC-1) of the non-magnetic writable storage area 126 comprises physical format information for the non-magnetic writable storage area 126 (Figs. 4-6); and

(b) as in claims 43 and 44, the lead-in area (TOC-1) including a connection zone which connects the read-only storage area 124 and the non-magnetic writable storage area 126 (Figs. 5 and 6).

However, both Verbakel and Kozuka do not teach the following:

(a) as in claims 43 and 44, at least one defect management zone, and a drive test zone.

Mine teaches at least one defect management zone (DMA 1&2) and a drive test zone (Fig. 2; column 6, lines 1-8).



A rewritable storage medium has defective data sectors caused by occasional bad recording surfaces and scratches on the storage area. Therefore, it is necessary for a rewritable disc to prepare a list of bad sectors during a write-test process in order to verify whether a recording sector is good or bad. Hence, it would have been obvious to one of ordinary skill in the art at the time of invention to include defect management zone and drive test zone in Verbakel's lead-in area similar to Mine's, because by including the defect management zone and drive test zone in Verbakel's lead-in area, the reading/writing of data from/on a sector without knowing its condition before can be prevented.

18. Claims 47, 49, 61, 62, 70, 82, 88 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Mine (U.S. Patent 6,243,338).

Verbakel teaches an optical disc very similar to that of the instant invention. For example, Verbakel teaches the following:

(a) as in claim 47, the second control information (TOC-1) comprises a connection zone to connect the read-only storage area 124 and the non-magnetic writable area 126 (Figs. 5 and 6);

(b) as in claims 49 and 70, reproducing and/or reproducing unit 38 reads the physical format information for the read-only storage 120, 122, 124 area and the non-magnetic writable storage area 126 to reproduce data in the read-only storage area and the non-magnetic writable storage areas respectively; (Figs. 4-6);

(c) as in claims 47, 49, 61, 62 and 70, reads the connection zone (Figs. 4-6); and

(d) as in claim 70, a connection zone (TOC-1) to connect the read-only storage area 124 and the non-magnetic writable storage 126 (Figs. 5 and 6).

However, Verbakel does not teach the following:

(a) as in claim 47, 49, 61 and 62, at least one defect management zone, and a drive test zone; and

(b) as in claim 49, read defect management zone and drive test zone to control the data in the writable storage area.

Mine teaches reading of at least one defect management zone (DMA 1&2) and a drive test zone in a Lead-in (Fig. 2; column 6, lines 1-8).

A rewritable storage medium has defective data sectors caused by occasional bad recording surfaces and scratches on the storage area. Therefore, it is necessary for a rewritable disc to prepare a list of bad sectors during a write-test process in order to verify whether a recording sector is good or bad. Hence, it would have been obvious to one of ordinary skill in the art at the time of invention to include defect management zone and drive test zone in Verbakel's lead-in area similar to Mine's, because by including the defect management zone and drive test zone in Verbakel's lead-in area, the reading/writing of data from/on a sector without knowing its condition before can be prevented.

19. Method claims 82, 88 and 91 are drawn to the method of using the corresponding apparatus claimed in claims 61 and 62. Therefore method claims 82, 83, 88 and 91 correspond to apparatus claims 61 and 62 are rejected for the same reasons of anticipation as used above.

20. Claims 50 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Kozuka et al. (U.S. Patent 6,466,735).

Verbakel teaches an optical recording medium very similar to that of the instant invention. For example, Verbakel teaches the following:

(a) as in claim 50, the hybrid identification information comprises information indicating a presence or absence of the writable storage area (Fig. 4; TOC in table 2 includes the writable storage area's starting address).

However, Verbakel does not teach the following:

(a) as in claim 50, information on a part version of the hybrid disc.

Kozuka teaches the following:

(a) a part version indicating a version number of the optical recording medium (column 7, line 36).

Information or programs stored in a DVD disc such as Kozuka's can be renewed or updated. For the benefit of verifying the difference of stored information, it would have been obvious to one of ordinary skill in the art to include a version number of the disc similar to Kozuka's, because the version number can be used to alert a user when the disc is being edited/updated.

21. Method claim 71 is drawn to the method of using the corresponding apparatus claimed in claim 50. Therefore method claim 71 corresponds to apparatus claims 61 and 62 are rejected for the same reasons of anticipation as used above.

22. Claims 60, 78, 80 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Kozuka et al. (U.S. Patent 6,466,735).

Verbakel teaches an optical disc very similar to that of the instant invention. However, Verbakel does not teach the following:

(a) as in claim 60, a part version indicating a version number of the optical recording medium.

Kozuka teaches the following:

(a) a part version indicating a version number of the optical recording medium (column 7, line 36).

Information or programs stored in a DVD disc such as Kozuka's can be renewed or updated. For the benefit of verifying the difference of stored information, it would have been obvious to one of ordinary skill in the art to include a version number of the disc similar to Kozuka's, because the version number can be used to alert a user when the disc is being edited/updated.

23. Method claims 78, 80 and 89 are drawn to the method of using the corresponding apparatus claimed in claims 58 and 60.

Therefore method claims 78, 80 and 89 correspond to apparatus claims 58 and 60 are rejected for the same reasons of anticipation as used above.

24. Claim 69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verbakel (U.S. Patent 6,370,090) in view of Mine (U.S. Patent 6,243,338).

Verbakel teaches a method of recording reproducing data onto/from an optical recording medium 11 very similar to that of the instant invention. However, Verbakel does not teach the following:

(a) as in claim 69, a defect management zone and a drive test zone.

Mine teaches at least one defect management zone (DMA 1&2) and a drive test zone (Fig. 2; column 6, lines 1-8).

A rewritable storage medium has defective data sectors caused by occasional bad recording surfaces and scratches on the storage area. Therefore, it is necessary for a rewritable disc to prepare a list of bad sectors during a write-test process in order to verify whether a recording sector is good or bad. Hence, it would have been obvious to one of ordinary skill in the art at the time of invention to include defect management zone

and drive test zone in Verbakel's lead-in area similar to Mine's, because by including the defect management zone and drive test zone in Verbakel's lead-in area, the reading/writing of data from/on a sector without knowing its condition before can be prevented.

25. Claim 93 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ando et al. (U.S. Patent 5,537,387) in view of Kozuka et al. (U.S. Patent 6,466,735).

Ando teaches an optical recording method very similar to that of the instant invention. For example, Ando teaches the following:

(a) as in claim 93, a read-only (ROM) storage area 31 having a lead-in area 34 and a data area 33 (Fig. 4);

(b) as in claim 93, a writable (RAM) storage area 32 having a lead-in area 36 and a data area 35 (Fig. 4);

(c) as in claim 93, the lead-in area 34 of read-only storage area 31 comprises a first control information for the read-only storage area 31 and the writable storage 32 (Fig. 4; TOC is the control information; column 6, lines 34-50);

(d) as in claim 93, reading the first control information from the lead-in area of the read-only (ROM) area (Fig. 4);

(e) as in claim 93, controlling the data in the read-only area and the writable area based upon the read first control information (Fig. 4).

However, Ando does not teach that the read-only area is a DVD-ROM and the writable area is a DVD-RAM.

Kozuka teaches an optical disk having a DVD-ROM layer and a DVD-RAM layer (Fig. 2C).

Storage media such as Ando's CD and MO are very slow and each has very limited storage capacity. In order to improve the access time and storage capacity Ando's recording medium, it would have been obvious to one of ordinary skill in the art to use Kozuka's DVD-ROM and a DVD-RAM type recording medium to replace Ando's CD and MO respectively, because the replaced DVD type recording medium has advantages of fast access time and large storage capacity over the original CD type recording medium.



26. Claim 94 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ando et al. (U.S. Patent 5,537,387) in view of Kotuku et al. (U.S. Patent 6,466,735) and Mine (U.S. Patent 6,243,338).

Ando teaches an optical disc very similar to that of the instant invention. For example, Ando teaches the following feature in addition to the above claim 93:

(a) as in claim 94, the writable area having a connection zone which connects the read-only storage area and the writable storage area (Fig. 4; TOC indicates recording positions; column 7, lines 51-54).

However, both Ando and Kozuka do not teach the following:

(a) as in claim 94, the writable storage area having defect management information.

Mine teaches at least one defect management zone DMA 1&2 (Fig. 2; column 6, lines 1-8).

A rewritable storage medium has defective data sectors caused by occasional bad recording surfaces and scratches on the storage area. Therefore, it is necessary for a rewritable disc to prepare a list of bad sectors during a write-test process in order to verify whether a recording sector is good or bad. Hence, it would have been obvious to one of ordinary skill in the art at the time of invention to include defect management information in Ando's writable lead-in area similar to Mine's,

because by including the defect management information in Ando's lead-in area, the reading/writing of data from/on a sector without knowing its condition before can be prevented.

***Allowable Subject Matter***

27. Claims 17, 18, 20, 22, 55-57, 76, 77, 79, 81 and 83 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

28. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 17, 55 and 76, the prior art of record fails to teach or fairly suggest the following features:

(a) the physical format information for the writable storage area is stored in bytes 1024 through 2047 of the first control information.

As in claims 18, 56 and 77, the prior art of record fails to teach or fairly suggest the following features:

(a) the physical format information for the read-only storage area is stored in bytes 0 through 16 of the first control information and the hybrid disc identification information is stored in bytes 17 and 18 of the first control information.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

**Prior Art**

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakashima (5,835,589) is pertinent because Nakashima teaches an optical recording medium having a RAM region and a ROM region.

Weidner (6,205,112) is pertinent because Weidner teaches a two layers optical recording medium having a DVD storage side and a CD storage side.

Ueno (6,031,808) is pertinent because Ueno teaches a two layers optical recording medium having a ROM storage side and a RAM storage side.

Kawamura et al. (5,812,519) is pertinent because Kawamura teaches an optical recording medium having a ROM storage area and a RAM storage area.

Itami et al. (5,684,785) is pertinent because Itami teaches an optical recording medium having a read only region and a read-write region.

30. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.  
20231 Or faxed to:

(703) 872-9306 (for formal communications intended for entry. Or:

(703) 746-6909, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (703) 305-3032 between 9:30 am to 6:00 pm, Monday to Friday.

1/c 11/23/04

Kim-Kwok CHU  
Examiner AU2653  
November 23, 2004

(703) 305-3032

*William Kozul*